

# PCDH11X/Y (D-2): sc-514085

## BACKGROUND

Protocadherins (PCDHs) are a subfamily of cadherins, a large group of related glycoproteins that mediate calcium-dependent cell-cell adhesion via a homophilic mechanism. Involved in a variety of functions, protocadherins help to regulate neural development and synapse formation. PCDH11X (protocadherin 11 X-linked), a 1,347 amino acid protein, and PCDH11Y (protocadherin 11 Y-linked), a 1,340 amino acid protein, are single-pass type I membrane proteins that each contain 7 cadherin domains and each exist as multiple alternatively spliced isoforms. Expressed strongly in both adult and fetal brain tissue, PCDH11X and PCDH11Y function as calcium-dependent cell adhesion proteins that are essential for the segmental development and function of the central nervous system. Variations in the PCDH11X and PCDH11Y genes are associated with an increased susceptibility to brain-related afflictions, such as late-onset Alzheimer's disease.

## REFERENCES

1. Yoshida, K. and Sugano, S. 1999. Identification of a novel protocadherin gene (PCDH11) on the human XY homology region in Xq21.3. *Genomics* 62: 540-543.
2. Yagi, T. and Takeichi, M. 2000. Cadherin superfamily genes: functions, genomic organization, and neurologic diversity. *Genes Dev.* 14: 1169-1180.
3. Nollet, F., et al. 2000. Phylogenetic analysis of the cadherin superfamily allows identification of six major subfamilies besides several solitary members. *J. Mol. Biol.* 299: 551-572.
4. Blanco, P., et al. 2000. Conservation of PCDHX in mammals; expression of human X/Y genes predominantly in brain. *Mamm. Genome* 11: 906-914.
5. Blanco-Arias, P., et al. 2004. Protocadherin X (PCDHX) and Y (PCDHY) genes; multiple mRNA isoforms encoding variant signal peptides and cytoplasmic domains. *Mamm. Genome* 15: 41-52.

## CHROMOSOMAL LOCATION

Genetic locus: PCDH11X (human) mapping to Xq21.31, PCDH11Y (human) mapping to Yp11.2.

## SOURCE

PCDH11X/Y (D-2) is a mouse monoclonal antibody raised against amino acids 384-458 mapping within an internal region of PCDH11X of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PCDH11X/Y (D-2) is available conjugated to agarose (sc-514085 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514085 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514085 PE), fluorescein (sc-514085 FITC), Alexa Fluor® 488 (sc-514085 AF488), Alexa Fluor® 546 (sc-514085 AF546), Alexa Fluor® 594 (sc-514085 AF594) or Alexa Fluor® 647 (sc-514085 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514085 AF680) or Alexa Fluor® 790 (sc-514085 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

PCDH11X/Y (D-2) is recommended for detection of PCDH11X and PCDH11Y of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of PCDH11X: 148 kDa.

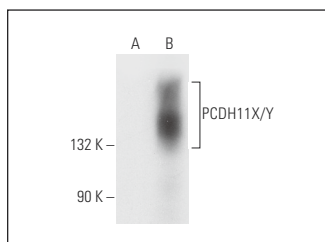
Molecular Weight of PCDH11Y: 147 kDa.

Positive Controls: PCDH11Y (h): 293T Lysate: sc-174274.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



PCDH11X/Y (D-2): sc-514085. Western blot analysis of PCDH11X/Y expression in non-transfected: sc-117752 (A) and human PCDH11Y transfected: sc-174274 (B) 293T whole cell lysates.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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